

Nova's Night-time Light Adventure

Learning objective: To understand that light is essential for seeing and that it travels from light sources to our eyes.

Read the passage below carefully and answer the questions. Make sure to use full sentences where possible.

Nova the barn owl loves the quiet of the night. She knows that to see in the dark, she needs light. Light travels in straight lines from a source, such as the glowing moon or the twinkling stars, to our eyes. When Nova flies over the woodland, she notices that she cannot see through the thick, old oak trees. This is because the trees are opaque; they block the light and create a dark shadow on the forest floor. However, when she looks at the surface of the pond, she sees the moon's reflection shimmering on the water. The light from the moon bounces off the surface and travels to her eyes, allowing her to see the bright image. If Nova were to hide behind a piece of clear glass, she would still be visible because the glass is transparent, letting light pass straight through. Understanding how light moves helps Nova navigate the forest safely, ensuring she never bumps into branches while searching for her next big science discovery under the starry sky.

Word bank: reflection · source · transparent · opaque · shadow · luminous

1. Name two examples of light sources mentioned in the passage. (2 marks)

2. What happens to light when it hits an opaque object like an oak tree? (2 marks)

3. Why does Nova need light to be able to see her surroundings? (2 marks)

4. Explain why Nova can see her reflection in the pond but not through the trees. (2 marks)

5. Do you think it would be easier for Nova to hunt if everything in the forest were transparent? Explain your answer. (2 marks)

Draw: Draw a diagram showing light traveling from a light source (like the moon) hitting an object and then reaching Nova's eyes.



Extension challenge: Research how shadows change size throughout the day. Write three sentences explaining why a shadow might be longer in the morning than at midday.